

International Association of Hydrogeologists
AUSTRALIAN NATIONAL CHAPTER

Volume 13, No. 1

February, 1996



NEWSLETTER

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IAH-AUSTRALIA PRESIDENT'S MESSAGE

Queensland has now hosted the National Executive for 12 months. We have gradually sorted out a lot of queries regarding membership, addresses and subscriptions. Robert Ellis (Secretary) and Peter Evans (Treasurer) are doing an excellent job in getting everything onto computer files and our Committee still remains keen. One important area for us is the interest being shown in the IAH and the continuing trend of new members.

It is very pleasing to see that Victoria now have an enthusiastic Committee planning for the 1998 groundwater conference. This international conference, hosted by IAH but not an official IAH Congress, will have "seed money" to pay for initial items such as publicity, and provided from the 1994 Adelaide Conference profit. This appears to the National Executive to be the logical use of the funds that were generated from that successful event.

The road towards incorporation of the Australian Chapter of IAH is fairly long, but progress is being made and the application should be submitted in the next few months. Incorporation has significant benefits, not least of which is to take some personal responsibility from Committee members, should the IAH ever be subject to legal action.

And finally in this quick update. Professor Michael Knight, the Australian Chapter's nomination for Chairman of the International Association, will be elected to this position unopposed. It was no secret at the Edmonton Conference that Michael would be standing and that he had support from some of the existing international executive, and it appears that the rest of the IAH internationally were happy to support his nomination, by not proposing alternative candidates.

Congratulations to Professor Knight. His Presidency should do much to raise the profile of the IAH in Australia, and increase the awareness of the IAH international community, especially in the Northern Hemisphere of us in the Pacific and South East Asian region.

The National Executive meet on 25 January, 1996, and discussed the above and other items.

I wish you all a very prosperous and successful 1996.

John Hillier
President IAH-Australia

EDITORIAL COMMENT

Seasons greetings, happy new year and all the best for 1996.

My apologies are extended here as Volume 12, No. 4 didn't happen. Almost enough material was at hand, but with the end of year work loads I ran out of time. We hope that this has in no way inconvenienced anyone. The "plan" for 1996 is for issues in February, May, August and November.

The Australian Groundwater School was held in Brisbane in 1995, in two parts 27 November to 1 December (fundamentals of the science) and 4-8 December (flow modelling). This was organised by the Centre for Groundwater in Adelaide. It was very well attended (around 55 in part 1), as apparently was the similar one held in Perth in October. At both locations local groundwater people were largely used as lecturers, which gave more relevance to the content for each area. Both sessions were successful, and we hope to provide some detailed feedback from the organisers next issue.

Probably the major change in groundwater groups in Australia over the last 5 years has been the "rationalisation" within government departments. The result has been much reorganisation, changes of name, addresses and other contacts, as well as personnel. This has provided a deal of confusion for most of us. Therefore, we propose in the next issue to have an article outlining the recent history of the groundwater group in each state or territory, and explaining what it currently is. Could the different organisations send in such a summary of their history since, say, 1990. One A4 page would be ideal. Timeframe, by end of April. This will help us greatly.

In future issues we will be including profiles of committee members of IAH in Australia, starting with the National Executive. We hope then to go through the states. This will be a way to explain who people are. Australia has some highly competent and well experienced groundwater people that we should know more about.

Also note that we will be pleased to accept further paid advertisements, in the future. This has been a very effective way of off-setting printing and mailing costs of the Newsletter.

The best way to send Newsletter items is direct to the editor, either by email (which I can extract and reformat), or mail it in a camera-ready form of A4 size (which will be reduced to A5). Don't need bromides, just a good clear copy. To:

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management of a precious resource

REPORTS FROM IAH BRANCHES

QUEENSLAND BRANCH

Movement of Groundwater Group

The old Groundwater Assessment Group of the Department of Primary Industries (DPI) - Water Resources has been relocated from Brisbane's Central Business District out to Indooroopilly (8 km southwest) to form part of the Resource Management Institute (RMI). The establishment of the RMI has occurred as part of the formation of the Resource Management Business Group and the commercialisation of the water and forest services of the DPI. The RMI has been set up as a statewide centre of excellence for natural resource management and brings together DPI staff with skills in the four natural resource areas - forest, fish, land and water.

Meeting 21 November, 1995

Attendance was down at this meeting as it was held at the RMI at Indooroopilly and members are still trying to find their way. Colin Laing of ACM Laing & Associates presented a talk on the meeting of the Commission on Mineral and Thermal Waters which was held in France. Colin discussed the origin and chemistry of some of the mineral waters in France and importance of these waters to the tourist industry.

RESOURCE MANAGEMENT INSTITUTE SEMINAR

The Cooloola Area, Groundwater and the Environment

John Hillier

This seminar was given by John Hillier, Manager of the Groundwater Assessment Group of the Resource Management Institute, DPI, on 9 November, 1995. The investigation was centred on Cooloola National Park and associated areas, due to recent moves to have them listed as World Heritage locations. The area is in the coastal strip from Noosa Heads to around 50 km north (about 150 km north of Brisbane). This is formed by a long beach with continuous large sand dunes, and paleo-dunes inland. Most of the area is drained to the south via Tewah Creek, Lake Cootharaba and the Noosa River. In the northern part, Tin Can Bay forms a sand spit and peninsula nearly 20 km long, with Rainbow Beach on the seaward side.

The whole area is composed of a substantial sand mass, typically quartz sand, which contains large quantities of groundwater. Some of the streams draining the area are used for water supply, such as for Rainbow Beach and Tin Can Bay. The Groundwater Assessment Group was retained by the Cooloola Shire to investigate the effect of increasing the volume of water taken for urban use, both ground and stream water. This question was raised by the Department of Environment and Heritage who were concerned about the type and level of changes and impact.

The study produced many interesting results and extended south to Lake Cootharaba, and included drilling of bore holes for water chemistry and water levels, stream gauging and water quality profiling and developing of an overall groundwater model. Several important groundwater findings were, the steep gradient of the water table away from the central line of dunes, both westward to Tin Can Bay and eastward to the ocean, and the westward decrease in TDS of the groundwaters related to rainfall. The tidal extent but small range in Noosa River was also surprising as was the amount of groundwater baseflow into the drainage system. The lake has a very small tidal range of around 10 cm, but a minor tidal effect is measurable 20 km upstream from the lake in the Noosa River. From conductivity profiling in the river, it was found that even at this distance a thin layer of saline water was underlying the freshwater. The freshwater is of groundwater origin, and of high quality.

NORTHERN TERRITORY BRANCH

NORTHERN TERRITORY NEWS

submitted by Gary Humphries

In July, a meeting of all available IAH members from Northern Territory was held in Darwin. The meeting decided to elect a three-member State Committee, and the following were elected unopposed:

President:

Steven Tickell, Hydrogeologist, Water Resources Division, Darwin

Vice-president:

Peter McDonald, Water Resources Manager Southern Region,
Water Resources Division, Alice Springs

Secretary/Treasurer:

Gary Humphreys, Geophysicist, Water Resources Division, Darwin

Recent recruits to the NT group are Peter Jolly, Principal Groundwater Engineer for Water Resources Division and Bill Bean, Scientist for the Darwin Regional Landuse project.

Three members have recently returned from overseas work. Geoff Prowse (now in Darwin) and Eric Rooke (now in Alice Springs) have both finished contracts with Auscon in Oman. Michael Jamieson spent several months with UNHCR in Uganda. Any or all of the above may be prevailed upon to provide stories for the newsletter in future.

In the past few months, three speakers have illuminated our lunchtimes. Steve Appleyard from the Geological Survey of Western Australia presented a half-day discussion on the groundwater resource and vulnerability studies in the Perth Basin. Geoff Prowse gave a summary of his work in Oman. Richard Nixon from GSWA presented his side of the Ord River irrigation developments. The Ord River project is a hydrological and modelling exercise to study the groundwater effects on both sides of the NT/WA border if the major irrigation scheme is extended.

At a further meeting of Darwin-based members on 21 Nov, the branch decided to develop two projects as an IAH initiative. A subcommittee was formed to begin preparing hydrogeological excursion guides to the Darwin rural area and region. The excursion guide will probably take a loose-leaf form, with each location described by the local expert. The meeting chose to investigate reported caves in Proterozoic dolomite in the Victoria River Region, as the site of a possible future excursion.

It is regrettable that no NT members of IAH exist outside of the Water Resources Division. Consequentially, the committee is very interested to hear from any IAH members visiting the NT, and suggests that any visitor's offer to present interesting material is likely to be accepted, in exchange for the latest hydrogeological excursion guides.

WATER RESOURCES DIVISION VIDEO

The Division has finalised a 7 minute video on its role in management of NT water resources. It was shown in Alice Springs during Water Week. The video is available for use internally or externally, wherever there is a need or opportunity to raise awareness of the importance of managing our water resources and/or advise on the activities of the Division.

For further information please contact Jackie Stanger on 24 7232

VICTORIAN BRANCH

INTERNATIONAL ASSOCIATION OF HYDROGEOLOGISTS VICTORIAN COMMITTEE

December 1995 Report

1. Meetings

- 30 August 1995 Landfills
Tony Lane, Darryl Strudwick
- 14 November 1995 Mine Dewatering
Doug Cheney, Dick Sandner, Peter Bentley

2. Organisational Change

The Centre for Land Protection Research in Bendigo, which is part of the Department of Conservation and Natural Resources, is in the process of being corporatised and is being set up as a separate institute.

3. People Movements

Andy Shugg is going to Disneyland.
Tony Lane has left DJ Douglas and has set up his own company.
Paul Bolger has left CMPS&F and has joined Kinhill.

4. International Groundwater Conference

Planning for the International IAH Groundwater Conference to be held in Melbourne in 1998 has now commenced. An Organising Committee has been established and is meeting regularly. The exact date for the conference has not been decided as yet but will be early 1998.

The exact theme for the conference has not as yet been decided but it will embrace sustainability.

In the next edition of the IAH Newsletter we will give more information so that you can put the date of the conference in your diary and begin to write your abstract.

We will soon be seeking sponsorship for the conference and are very interested in your help in this respect.

5. Masters Program in Hydrogeology and Environmental Science, University of Melbourne

The core program in hydrogeology in The Masters Program of Hydrogeology and Environmental Science is run jointly by the School of Earth Sciences and the Department of Environmental Engineering at the University of Melbourne. It has been running since 1992. Under this program candidates complete a minor thesis and undertake a number of post-graduate courses of which the core ones are: Hydrogeology, Groundwater and Contaminant Transport Models, Solute Transport in Groundwater, Water Quality and Contaminant Management, Contemporary environmental issues, Remote Sensing for Groundwater Applications, the Atmospheric Environment, Physics and Chemistry of the Regolith and Land Use Management and Environmental Assessment.

To date 61 candidates have entered the program and 8 have now completed their Masters. Candidates come from throughout Australia. The experience has been that most candidates who have undertaken the program are now working, but are continuing with the Masters Program on a part time basis. Research includes modelling of contamination associated with waste disposal, genesis and management of nitrate in groundwater associated with different land use, salinisation, behaviour of pesticides in the unsaturated and saturated zones, water quality around landfills and mine tailings management. These projects have been strongly supported by government agencies, consultants and industry.

Completed minor theses include Robert Brownbill on the Hydrogeology and Hydrochemistry of the Wimmera Region of the southern Murray Basin in which Robert Brownbill studied the hydrology and chemistry of a string of saline groundwater discharge lakes occupying a relic stream line. "Arsenic in the gold and base metals mining industry" by Kristina Ringwood. This thesis reviewed speciation, behaviour and risk and management of arsenic wastes associated with the mining industry. The review was complemented by a field investigation of a tailings site. For this outstanding research she received a special award from the Australian Minerals and Energy Environment Foundation.

It is to be noted that majority of the Masters Core subjects are now available to post graduate students not only at the University of Melbourne but also to post graduate earth science candidates from Monash University and Latrobe University through the joint arrangement of the Victorian Earth and Planetary Sciences Institute (VIEPS). These short courses are also available through the Continuing Education Program at the University of Melbourne.

There are now three candidates enrolled for the Doctor of Philosophy: James Finegan who is working on groundwater contamination of the fractured basalt aquifer in the western suburbs of Melbourne. Ray Evans who is studying salinity in the Booligal Catchment New South Wales and Young Nahm investigating the role of groundwater in petroleum accumulation in the Gippsland Basin.

In addition to the Masters Program in hydrogeology the University of Melbourne has introduced undergraduate hydrogeology courses in the Faculty of Engineering and the Faculty of Science.

Those who wish to apply to start the Masters Program or to take on individual subject should contact:

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WESTERN AUSTRALIAN BRANCH

WESTERN AUSTRALIA

BRANCH MEETINGS 1995

April 19

John Hillier: Department of Primary Industry, Queensland

Groundwater development and consequent problems - the IAH position

June 26 Annual General Meeting

Richard Vogwill: Dames and Moore

Groundwater studies at the Mae Moh lignite mine, Thailand

September 19

Charles Lawrence: University of Melbourne

Groundwater and the Murray Basin

October 23

Don Macpherson: Department of Minerals and Energy

Reflections on a career in water well drilling

November 27

Keith Berry: Western Mining Corporation

Development of palaeochannel aquifers for the Mt Keith nickel project.

1995-6 Committee

Chairman	John Waterhouse
Vice Chairman	John Throssell
Secretary	Gary Meyer
Meetings Secretary	Len Baddock
State Liaison	Philip Commander

WESTERN AUSTRALIA

Water and Rivers Commission

The new organisation came into operation on 2 January 1996, combining the functions of the Hydrogeology Branch of the Geological Survey of Western Australia, the Water Resources Division of the former Water Authority, and the Waterways Commission. Most staff positions below branch manager have now been filled on a like-to-like transfer, and a CEO and Divisional Directors are currently being appointed to the following structure:

- Resource Investigations Division**
 - Groundwater Investigations Branch**
 - Groundwater exploration Section
 - Hydrogeological Mapping and Advice Section
 - Groundwater Resource Appraisal Section
 - Groundwater Contamination Investigations Section
 - Rivers and Estuary Investigations Section**
 - Catchment Salinity Investigations Section**
- Policy and Planning Division**
 - Strategic Water Resources Planning and Policy Branch**
 - Regional Beneficial Use Assessment and Planning
 - Development Planning
 - Hydrologic Services
 - Water Sensitive Urban Design
 - State Policy and Water Conservation
 - Water Industry Law & Industry Reform
 - Management Planning Branch**
 - Environmental Planning and Wetlands Management
 - Withdrawal Use Planning
 - Public Water Source Protection
 - Point Source Pollution Prevention and Management
 - Waterways Management
 - Statutory Referrals and Liaison
 - Community Support and Communication Branch**
 - Farm Water Planning**
- Regional Services Division**
 - Regional Support Branch**
 - Swan River Trust Support
 - Regions (5)
- Corporate Services Division**

The head office of the new organisation is located in the Hyatt Centre, at 3 Plain Street, East Perth (across the road from the Geological Survey in Mineral House).

A wake for Hydro was held on 1 December and was attended by many past members and friends to mourn the passing of 33 years of hydrogeological endeavour in the Geological Survey.

GENERAL ITEMS

SUPPORT FOR DEVELOPING COUNTRIES

The sponsorship to developing countries personnel program has received a lot of interest, and support. Quite a few Australian members have put in the additional \$10, as individual sponsors. South Australia has put in a block of funds. Thank you all very much. Others are also expressing interest. Because of the different types of support, the National Executive feels we need to formally construct a program, and an overall plan.

A sub-committee has been formed to do this, and the results will be presented in the next newsletter. The people involved are Lindsay Furness, John Harman and Malcolm Cox. We have had quite a strong response from hydrogeologists in the SW Pacific area, and so need to develop some system.

This is certainly a good way of developing interaction with neighbouring offshore countries.

REPORT: NT WATER BLUEPRINT FOR FUTURE DIRECTION

This is a very useful summary report produced by the Water Resources Division, Power and Water Authority. While it is produced more for general use it provides an overview of the current status and likely future of all water supplies and their quality, in the Northern Territory.

Part A - Water Resources Overview

Part B - The Plan

1. Territory-wide Issues
2. Regional and Local Issues
3. Industry Issues

The booklet is 55 pages in length, and can be obtained from:

Water Resources,
SASCO House, 8 Cavenagh St
GPO Box 1096
Darwin, NT, 0801

Attn. Bev Phelts tel (089) 24 7269

Mawendra Nandan
13 McKell Close
BONNYRIGG NSW 2177

Mawendra joined the Queensland Branch of the Association in March 1992, while studying Geology at the Queensland University of Technology in Brisbane. He remained a member of the Queensland Branch although he returned to his employment in Fiji.

Early in 1995 he moved to Australia. He is now seeking employment in the hydrogeological field. If anyone can help, please contact Mawendra.

PROFESSIONAL REGISTRATION

The Australian Institute of Geoscientists has now produced a detailed *Proposal for the Registration of Geoscientists, September 1995*. This recommends a new voluntary grade of membership as **Registered Professional Geoscientist** requiring five years post-educational experience. AIG Members would select for registration one of the following categories of **Field of Practice**

- Mining
- Mineral Exploration
- Petroleum
- Geotechnical and Engineering
- Coal
- **Hydrogeology**
- Environmental
- Other Specialist

The recommended postnominal would be for example: **RP Geo Hydrogeology**

Applicants will need, in addition to a proposer and seconder, to provide written references testifying to the experience and competence of the applicant in the selected field of practice. Referees need not necessarily be members of AIG.

Applications would be assessed by a Registration Board, comprising AIG members and representatives from other specialist geoscience organisations where appropriate.

A requirement for continued registration would be continuing professional development of 50 weighted hours per year taking account of conferences, post graduate education, courses, on the job training, and private reading of learned publications

Fees are envisaged to be \$100 on application, and less than \$100 pa including AIG membership.

AIG is supported in this proposal for professional registration by other professional geoscience societies in Australia through the Australian Geoscience Council.

Further details can be obtained from D P Commander, Water and Rivers Commission, 3 Plain St, East Perth, WA 6004, or from the Registration Subcommittee, AIG, PO Box 107, Victoria Park, WA 6100.

EMAIL BULLETIN BOARD IN HYDROLOGY

The Department of Civil Engineering at Monash University, Victoria has a bulletin board in hydrology. To be included on the list, send the message:

"Subscribe hydrology *your name*" to LISTSERVE@eng.monash.edu.au

After this you can then send messages to the bulletin board to,

HYDROLOGY@eng.monash.edu.au

DIVINING

Phil Commander appeared on the Perth ABC's 7.30 Report on 29 November 1995 to give the hydrogeologist's view of divining, to balance a human interest story of a diviner working in the State's southwest. The line taken was that divining originated in Germany in the 1500s where it was applied to locating minerals. The woodcut depicted in the last newsletter (taken from Agricola's *De Re Metallica*) shows forked twigs being used to 'locate' veins of ore. In the 1600s divining appears to have been extended to locating mineral water, and then to criminals, but after the Inquisition banned its use for criminals in 1701, divining seems to have been restricted mostly to groundwater, where the success was more certain! The last word on divining *The Divining Rod- A History of Water Witching*, written by A J Ellis in 1917 and published by the USGS as Water-Supply Paper 416, is well worth reading.

On water divining

Through 1995 there was a keen discussion for and against on the HYDROLOGY list of Monash University. There were some interesting personal experiences related by Peter Woods, reproduced here.

During my field days as a hydrogeologist working for a (conventional scientific) hydrogeological consulting firm, divining was involved twice.

1. Yalgoo area, W.Aust., mid-1980s. The local 'reliable' diviner was called in when the client company agreed to pay for some bores for the station (ranch) on which we were proving up a water supply for the prospective mine. He picked 4 sites. No. 1 Near an existing, very low yielding bore in granite. Several of us used his two L-shaped wires and seemed to get a response at about the same spot (even me; no-one checked the other sites). Dust to total depth. No.2 This was within the area we had been exploring, and extrapolating from the work we had done I expected a minor supply in poorly sorted valley-fill sediments. There was enough for a windmill. No.3 In the Bull Paddock, an old palaeochannel in clayey, poorly sorted sediments. Enough water to dampen the dust but not enough for a windmill. No.4 Out in the sticks, in break-away country (for those who know it). Deeply weathered metamorphics, in an area we had great trouble finding water (from aerial photos looking for fracture zones). Dust to total depth (lots of nice colours though). Diviner disappeared for several weeks drinking methylated spirits.

2. Near Leigh Creek, S. Aust., mid-1980s. Intensely folded meta-sediments, looking for cavernous, fractured dolomite. On the last site the geology said the dolomite should be found and the exact location was not vital. The mine geologist decided to have a go with the wires, and as the client I let him so long as it was within the (small) area I indicated. He picked a bugger of a spot for the drillers (in a shallow gully) but the water was there.

I have often heard talked about (and used it as an example myself) a New South Wales government report looking at statistics over some hundreds of outback bores, where the success rate for divined bores was statistically the same as for those merely put in at convenient spots like behind the shed or on fence lines or fence corners to supply more than one trough. Has anyone got the actual reference?

Dr Peter Woods, Senior Environmental Scientist,
ERA Ranger Mine, Locked Bag No. 1, Jabiru NT 0886
'ph (089) 321 228 fax (089) 321 203 Email: Peter.H.Woods@north.com.au

The following reply came from John Milne:

The report you refer to was done by Bill Williamson now long retired. I'm sure there would be a copy in the NSW Water Resources Commission library and possibly PAWA library.

The woodcut was reproduced from an article "The problem of water divining" by M.W. Johns formerly a hydrogeologist with the ?NSW Dept of Mines. I don't have the reference, but pages are 5-14, and it may have been in Bulletin of the Aus IMM around 1968-1969 (Editor).

URBAN GROUNDWATER DATABASE RELEASED

You are invited to visit and contribute to the Urban Groundwater Database (UGD) web site at <http://www.dwr.csiro.au/UGD/>

The UGD is a USER-CONTRIBUTED database. You provide the data for your favourite Towns/Cities, and this data will be formatted and stored permanently at this site in a form accessible to everyone.

You can submit an entry directly into the database via the web site, or send it to me by email, fax or by Post!

The database was an initiative of the IAH Urban Groundwater Commission and is managed by Dr Claus Otto at the Centre for Groundwater Studies, CSIRO Division of Water Resources.

It provides brief descriptions of a wide variety of cities and their groundwater issues, together with contacts and references. It is an initial access point with links to further information material.

I look forward to receiving your data submissions and any comments you may have.

Claus Otto

Dr. Claus J. Otto
CSIRO Division of Water Resources
Floreat Park Laboratory
Private Bag, PO WEMBLEY, W.A. 6014,
AUSTRALIA

email: claus@per.dwr.csiro.au
phone: (09) 387-0367
fax: (09) 387-8211
int. fax: 61-9-387-8211
<http://www.per.dwr.csiro.au>

AUSTRALIAN PRODUCED SOFTWARE

PESTLITE

Watermark Computing wishes to announce the release of PESTLITE, a version of PEST that can simultaneously optimise up to 4 parameters on the basis of up to 80 observations. PESTLITE is free; it can be downloaded from our web site.

(Note that for a full version of PEST the number of parameters and observations is unlimited.)

PEST is a model-independent nonlinear parameter estimator. It differs from other parameter estimation software in that it is able to communicate with an existing computer simulation model through the model's own input and output files. Thus a modeller does not need to alter a model in any way (or even possess the model's source code) to use it with PEST. PEST acts as a "shell", running a model as often as it needs to until the discrepancies between model-generated numbers and their field or laboratory counterparts are reduced to a minimum in the weighted least squares sense. It does this by adjusting user-specified model input data using a robust version of the Gauss-Marquardt-Levenberg method.

DOS and UNIX versions of PEST are available. For further details, visit our page at:

<http://www.gil.com.au/comm/pest/index.html>

or email Dr. John Doherty at:

jdoherty@gil.com.au

SOFTWARE

PUMPIT 4.0, NEW VERSION

submitted on behalf of Nic Spycher.

replies direct to him at: aqualog@ccnet.com

uploaded on our ftp server at:

<ftp://ftp.ccnet.com/users/aqualog> (note the slight change from our previous address)

This is a practical, quick, analytical radial flow model for DOS intended for both the professional and educational community. Version 4.0 includes powerful new features:

- Drawdowns can be specified at wells instead of flow rates; this is useful to generate groundwater flow maps and delineate capture zones and injection fronts using well drawdown data (e.g. sustainable drawdown). Unknown flow rates are automatically computed to reflect the input drawdown data (transient/steady state, confined/unconfined). Wells with variable pumping schedules and wells with fixed drawdown can be included in the same simulation (e.g. to model pumping near constant head boundaries).

- The migration of fronts and "plumes" of particles can be simulated; also, a time-delineation option has been added for capture zone and injection front analyses, and a better tracking algorithm allows for tighter, grid-independent, tracking.

- PUMPIT offers many other features. You may find it useful for applications such as pumping test preparation; optimization of pumping/injection well scenarios; contaminant migration and flow paths evaluations; estimating dewatering flow rates for excavations; quick "what if" illustrations for teaching/learning and presentations to clients; well head protection analyses; data tabulation; etc.

Groundwater flow maps can be generated directly from the PUMPIT menus through a transparent interface with the popular SURFER contouring package (versions 4.xx). For users who do not have SURFER but who would like to take advantage of this option, we can now provide at costs (no profit) an inexpensive special SURFER package just for PUMPIT. SURFER is a proprietary software product of Golden Software, Inc, Golden Colorado.

For more details, please see the text files and .GIF picture files in our ftp area. This is shareware, and the uploaded unregistered version has some limitations. Shareware is not freeware. A low registration fee is requested for continuous use (\$45/educational and \$65/commercial), and is the !only! support we get for developing this software.

Any feedback, or questions welcome.

Nic Spycher

AquaLogic, P.O. Box 12106, Berkeley, California 94712

aqualog@ccnet.com

NEW MEMBERS

We are pleased to welcome the following new members who have recently been accepted into the IAH.

Bean, William	NT	Blount, Alex	VIC
Dowie, John	SA	Harbison, John	QLD
Jolly, Peter	NT	Kent, Stephan	SA
Herbert, St John	NSW	Langton, Christopher	WA
Legg, Bill	QLD	Li, Jiaorong	QLD
Chakravartula, Prasanth Nallan			WA
Recsei, Tony	NSW		

UPCOMING CONFERENCES

SECOND INTERNATIONAL SEMINAR ON WATER AND ENVIRONMENT Kathmandu, Nepal 7-9 April, 1996

This seminar is organised by the Nepal Chemical Society, and supported by the Australian Embassy in Nepal. It is focused on developing country attempts to combat problems associated with water-borne diseases, and in conserving the water environment. The seminar aims at providing an international forum to promote and stimulate a more effective integration of these areas within water management.

The following aspects will be addressed:

- * Analysis of water and waste water
- * Water quality
- * Ground water protection and pollution
- * Water and waste water treatment
- * Water management (including disasters) in developing countries

Registration fees:

Foreign participants US\$ 150.00

Program:

April, 7, 1996	Registration, inauguration, and technical session
April, 8, 1996	Technical session
April, 9, 1996	Group discussion, closing ceremony, cultural program

All correspondence should be addressed to:

Mr Mohan Singh Khadka
Convenor
Ground Water Resources Project Development
Babar Mahal, Kathmandu, Nepal
Tel: (B/H) 977 1 224953 (A/H) 977 1 410036
Fax: 977 1 231979

or

Dr Mohan B Gewali
Co-ordinator
Central Dept of Chemistry
Tribhuvan University
Kirtipur, Kathmandu, Nepal
Tel: (B/H) 977 1 213277 ext 137 (A/H) 977 1 472862

GROUNDWATER/LAND-USE CONFERENCE 16-18 September, 1996

The inaugural "Groundwater and Land-Use Planning (focusing on Urban and Metropolitan Planning)" conference will be held at Fremantle, Western Australia.

For more information check the WWW page <http://www.iinet.com.au/~pp/>
or write to:

Conference Secretariat
PO Box 257 South Perth Western Australia 6151
fax: +61 9 450 2942
From: Geoff Prince, email: gprince@yarrow.wt.com.au

SPERA96

THE SOUTH PACIFIC ENVIRONMENTAL RADIOACTIVITY ASSOCIATION

4th SPERA ENVIRONMENTAL RADIOACTIVITY WORKSHOP

DARWIN 17-19 JUNE 1996

PRESENTATIONS

Both oral and poster presentations will be accepted. The proceedings will be published and authors will be requested to provide written manuscripts of their papers for peer review.

REGISTRATION

A registration fee of approximately \$250 will apply to cover the workshop cost. A SPERA member discount and a limited number of student concessions will be available.

The primary objective of SPERA is to facilitate communication among scientists in the field of environmental radioactivity, which involves study of the occurrence, transport, behaviour and impact of radioactive species present in the environment due either to natural processes or resulting from human activities.

Associated Workshop

RADIOLOGICAL ASPECTS OF THE REHABILITATION OF CONTAMINATED SITES

Immediately after SPERA96 there will be a follow-on Workshop on the Radiological Aspects of Rehabilitation of Contaminated Sites (RARCS). RARCS will be held in Darwin-Jabiru from 20-22 June 1996. The RARCS Workshop is co-sponsored by SPERA and it is hoped that many SPERA96 participants will avail themselves of the opportunity to visit Jabiru and attend RARCS.

SPERA96

Centre for Medical and Health Physics
Queensland University of Technology
GPO Box 2434
BRISBANE 4001 AUSTRALIA

Phone +61 7 864 2595
Fax +61 7 864 1521
email spera96@qut.edu.au

SPERA96 ORGANISING COMMITTEE

Riaz Akber (Chairperson),
QUT, Brisbane

Paul Martin,
ERISS, Jabiru, NT

Frank Harris,
OSS, Canberra, ACT

Brad Cassels,
Dept of Health, Darwin, NT

**INTERNATIONAL SYMPOSIUM ON GROUNDWATER DISCHARGE IN THE
COASTAL ZONE**
July 6-10, 1996
Moscow, Russia

Jointly sponsored by the Russian Academy of Sciences and the Land-Ocean Interactions in the Coastal Zone (LOICZ) Core Project of the IGBP.

Venue: Hosted by the Russian Academy of Sciences in the vicinity of Moscow.

Topics to be addressed include: Present status of knowledge concerning groundwater and associated geochemical fluxes to the coastal ocean, and of techniques for their study; potential importance of ground water fluxes (e.g. nutrients) to coastal zone processes, particularly as they involve the carbon cycle; needs and priorities for further research and assessment; coordination of data reporting, information exchange, and future research.

Participation: 50-60 invited scientists. Invitees will be expected to present results, concepts, or information relevant to one or more the topics listed.

Format: The present plan is for 8-12 summary or keynote speakers; in order to provide adequate time for discussion and workshop preparation of recommendations, the remainder of the presentations are expected to be in the form of posters.

Steering Committee and advisors: Dr. I. S. Zektser (chair), Dr. R. G. Dzhamalov, Dr. V. V. Gordeev, Dr. R. W. Buddemeier, Dr. H. Loaiciga, Dr. A. Aureli, Dr. J. P. Pernetta.

Because of limitations imposed by facilities, funding, and the necessary issuance of visas, it is expected that the final participants will be identified and invited in early Spring, 1996. In order to ensure the necessary scientific coverage and level of quality, participants will be selected primarily on the basis of responses to a first circular which will be distributed before the end of 1995. In view of the short time frame it is important that fax and/or e-mail addresses be included!

Those wishing to place a name (their own or others) on the list to receive the first circular should send name and address (including phone and fax numbers, and e-mail if available) to:

Dr. Robert W. Buddemeier
Kansas Geological Survey
1930 Constant Ave.
Lawrence, KS 66047 USA

(913) 864-3965 work phone
(913) 864-5317 fax
Bob_Buddemeier@msmail.kgs.ukans.edu

1997 the XXVII Congress of IAH

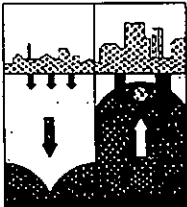
Groundwater in the Urban Environment

21-27 September 1997

Nottingham - United Kingdom

The second circular and call for abstracts will be distributed in January 1997. If you have not already responded to the first circular please contact:

Conference Nottingham
309 Hayden Road, Nottingham NG5 1DG, United Kingdom
Tel: +44 115 985 6545; Fax: +44 115 985 6612



Call for Papers

1996 Western Pacific Geophysics Meeting

American Geophysical Union

Brisbane, July 23 - 27, 1996

Abstract Deadline: March 15, 1996



Hydrology Program

General Program and Sponsor

This is the fourth in the series of conferences sponsored by the American Geophysical Union (AGU) to encourage international cooperation between AGU members and members of other geophysical societies in the western Pacific region. The format of the conference is similar to AGU's annual meetings and contributions on any topic in geophysics are welcome, but more in-depth discussion of issues of regional interest is encouraged.

Hydrology Program

Papers on all topics of hydrology are invited from both members and non-members of AGU. In addition to the special sessions listed below, there will be general sessions on surface water and climate, water and contaminant transport in the vadose zone and transport processes in groundwater systems.

Program Chairs:

Warren Bond, CSIRO Division of Soils, GPO Box 639, Canberra, ACT 2601, Australia. tel: +61-6-246-5948,

fax: +61-6-246-5965, email: w.bond@cbr.soils.csiro.au

Jim Davis, US Geological Survey, 345 Middlefield Road, Menlo Park, CA 94025, U.S.A. tel: +1-415-329-4484,

fax: +1-415-329-4453, email: jedavis@eamml.wr.usgs.gov

The Venue

The meeting will be held at the new Convention and Exhibition Centre on the South Bank of the Brisbane River. A hotel is located beside the Center and is expected to be open in

the July 1996. Other hotels are within a 25 minute walk to the Centre around and over the Brisbane River.

The Convention Centre is adjacent to South Bank Parklands, immediately across the Brisbane River from the city center. It has been developed as a 16 hectare (40 acre) place for people*, complete with waterways, gardens, re-created rainforests, a city beach, entertainment facilities and more than 20 restaurants and snack bars. The Queensland Performing Arts Complex, Art Gallery, Museum and State Library are also part of the South Bank facility. The typical Brisbane winter is sunny with clear blue skies, warm at mid-day and cool in the evening. July average temperatures lie between 11C and 20C.

Further Information

Further information about the program can be obtained from the program chairs.

Full details of the conference are also available from the AGU's World Wide Web site at the following address: <http://earth.agu.org/kosmos/wpgm96ca.htm#brisbane>, or by request from: American Geophysical Union, 1996 Western Pacific Geophysics Meeting, 2000 Florida Ave. N.W., Washington, DC 20009, U.S.A., fax: +1-202-328-0566.

Important Dates

Electronic Instructions Available:	January 1, 1996
Abstract Submission Deadline:	March 15, 1996
Abstract Withdrawal Deadline:	April 10, 1996
Western Pacific Geophysics Meeting:	July 23-27, 1996

MULTIPLE LAND USE AND CATCHMENT MANAGEMENT
11 and 12 September 1996
Kings College Conference Centre, Aberdeen, Scotland, UK

This important and innovative conference will make the case for an integrated approach to catchment management as the optimal strategy for coping with the potentially conflicting uses of a catchment. The Conference programme has been designed to ensure that the subject will be approached from a range of scientific and management perspectives.

PROGRAMME

Using a combination of invited papers, posters, model demonstrations and interactive workshops the Conference will attempt to provide answers to some of the following questions:

- * What are the key themes driving international and EC policy that affect catchment management?
- * What are the main issues and problems of catchment management from the perspectives of a range of key stakeholders for example, industry, forestry, agriculture, conservation, recreation?
- * What are the scientific challenges in catchment management with reference to climate, soils and plants, and the aquatic environment?
- * Special session on coping with the complexities of catchment management.

The Workshop, which is one of the key sessions of the Conference, will focus on issues raised by delegates during the two days and these may include:

- * Is integrated catchment management feasible?
- * In what situation is it desirable?
- * Is it essential for achieving environmental objectives?
- * Are there practical steps that can be taken to implement integrated catchment management?

Delegates will have the opportunity to contribute a poster to the conference on any of the main themes of the programme and to display working models/decision support tools for catchment management.

The Conference will be relevant to an international audience of all those involved in catchment management including scientists, water resource managers, planners and administrators and those with interests in wildlife and landscape conservation.

Further details from:

Dr Sue Bird, Conference Administrator
Macaulay Land Use Research Institute
Craigiebuckler, Aberdeen AB9 2QJ

Tel: +44 (0)1224 318611 Fax: +44 (0)01224 311556 Email: mi307@mluri.sari.ac.uk

MESOZOIC GEOLOGY CONFERENCE, BRISBANE
23-26 September, 1996

The Conference is being hosted by the Queensland Division of the Geological Society of Australia (GSA), and the IAH-Australia. IAH has accepted an invitation to be sponsor and organiser of one session. The preliminary program outline has three streams (A: Geotectonics; B: Mineral Resources; and C: Groundwater, Coal and Petroleum).

Within each of these are three fullday sessions, and Session C1 is proposed as **Hydrogeology of Mesozoic Basins:** groundwater occurrence, geochemistry, genesis, and environmental considerations of groundwater use

Papers can still be accepted in this session. The convenor of this session are,
Mr Iain Hair or Mr Andrew Moser
Coffey Partners International Pty Ltd
53B Fairlawn St
Nathan, QLD, 4111 tel (07) 3274 4411 fax (07) 3274 4977

**13th AUSTRALIAN GEOLOGICAL CONVENTION
AGSO JUBILEE SYMPOSIUM
Canberra 19-23 February, 1996**

Hydrogeological Papers Submitted

Land Degradation and Salinity (AO1)

Allen Chivas

Chlorine-36 in Australian rainfall and playas and the residence time of chlorine in the Australian landscape.

Melita Keywood

Stable Cl and chlorine-36 in atmospheric precipitation from Australia.

Steven Tickell

Hydrogeology of the Ord River paleochannel.

Groundwater Resources - Impacts of Human Activities (AO2)

Michael Knight

The relationship of groundwater and other water supplies to resource management and public health in urban and rural areas.

Peter Dahlhaus

A new conceptual model for salinity processes on the eastern Dundas Tablelands, Victoria - implications for the land manager.

Tamie Weaver

Hydrodynamic response of clay-till aquitard to changing potentiometric conditions in an underlying water-supply aquifer: implications for solute and contaminant transport.

Boyd Dent

The "Yarra aquifer" - a case of mixed urban interactions

Shawan Dogramaci

Strontium and sulphur isotopes as tracers of inter-aquifer mixing and water-rock interaction, south-west Murray Basin.

Jan Alexander

Trees influencing flow and sedimentation in the sub-humid, tropical upper Burdekin River, North Queensland, Australia.

Environmental Geochemistry - Identifying Natural Geochemical Anomalies (AO4)

M A Habermehl

Sources of fluoride in groundwater in North Queensland.

Gerry Jacobson

Chemical parameters affecting groundwater quality and environmental health in Central Australia.

Geophysics and Remote Sensing (AO6)

G. Street

The Saltmap - a sound technical basis for catchment and farm planning.

Mine Site Rehabilitation, Pollution and Remediation (AO7)

John Webb

A mass balance study of acid mine drainage at Queenstown, western Tasmania.

Anita Andrews

Origin of sulphate in surface and groundwaters within the Ranger uranium mine, Northern Territory.

Joe Whitehead

Geoscience and design of effluent disposal systems.

Irina Gildeeva

Environmental protection in connection with oil pollution.

Petroleum Hydrocarbon Analyser

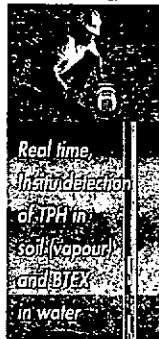
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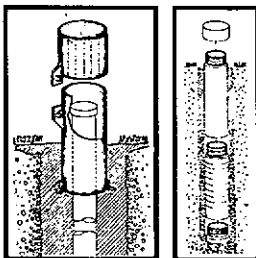
GEOTEST INSTRUMENTATION

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SE0019

Dear Members,

It's that time of year again when we have to remit membership funds to our parent body in the United Kingdom. Last year we had quite a backlog of unfinancial members, which meant that the membership monies remitted did not really reflect the true strength of the Australian Chapter.

This year we would like to rectify this situation !

To those members who have not yet paid their subscriptions for the 1995 calendar year, I am seeking your help. I would appreciate it if you could check your records to see if you have paid for 1995. If you find that you have not yet paid it would be appreciated if you could make prompt payment.

To all those members who have already paid their subscription for the 1995 calendar year...thankyou!

IAH FEES

FEES ARE NOW DUE

Fees have received appreciable discussion by the National Executive. The main concern is that as part of an international organisation we must be considerate of exchange rates. At the moment this is of particular concern as the bulk of fees paid is remitted to Germany. We have therefore voted that a fee rise is necessary. The IAH will still remain one of the cheapest professional organisations with an international journal.

The approach to annual Association fees now is to have them based on a calendar year. Therefore for 1995 the fees became due from the 1 January, 1995. As a further reminder an account will be sent with the next newsletter. Fees must be paid before 30 June, otherwise a penalty will be levied. Remember that fees for IAH as a professional association are tax-deductible. The new fee schedule will commence 1 April, 1995 and will not affect those already paid. The fees are,

Full Member	\$80.00
Student Member	\$50.00
Member + sponsor nominee (\$80+\$50)	\$130.00
Member + partial sponsor (minimum \$10)	\$90.00
Corporate Member	\$400.00
Organisation/corporate sponsor	\$50.00

A new fee category was established in 1994, that of "Sponsored Member". This category has been created for members in developing countries of our region, such as SW Pacific countries like Fiji, Solomons, Tonga, Vanuatu and Papua New Guinea, and SE Asian countries like Laos, Thailand, Vietnam, and Indonesia. This is a guide, but there are quite a few others, plus territories. There are, however, some potential members already in Australia who could be eligible, such as those who are refugees or newly arrived. We have attempted to clarify this here, following various queries and requests.

Member (full sponsor): pay \$80 + \$50, and nominate the person they wish to sponsor.

Member (partial sponsor): pay \$80 + \$10, and the \$10 will be put towards potential members on the IAH-Australia list. They are welcome to provide names to add to the list.

Organisation/corporate sponsor: \$50 per person sponsored, they may nominate a person, or leave it to the IAH-Australia selection. This could be used by companies, consultants or IAH state bodies. A 50% discount in advertising rates will then be available for 12 months.

We are attempting to building up a list of potential members who can then be selected. Are there other acceptable people that members know of? The main criteria is that they are eligible to join IAH, but due to salary considerations would find the fees difficult. We will later print lists of members who have participated.



IAH AUSTRALIA MEMBERSHIP LIST

This list is updated to end of 1996 as best we could do.. There are still many inconsistencies, but these will be addressed as renewals are received. Please check your details and notify us in changes are needed. Soon we will supply to state secretaries the entire database with other details such as phone/fax numbers.

Rob Ellis and Peter Evans

ACT					
NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE
BALD	DR J	AGSO	GPO BOX 378	CANBERRA	ACT 2601
BRODIE	MR R	AGSO	GPO BOX 378	CANBERRA	ACT 2601
EVANS	MR WR	AGSO	GPO BOX 378	CANBERRA	ACT 2601
GOMBOSO	MS J	CENTRE FOR RES AND ENV STUDIES	ASO	CANBERRA	ACT 2600
HABERWELH	DR MA	AGSO	GPO BOX 378	CANBERRA	ACT 2601
JACOBSSON	MR G	AGSO	GPO BOX 378	CANBERRA	ACT 2601
LANE	MISS J	AGSO	GPO BOX 378	CANBERRA	ACT 2601
LAU	MRS JE	GC & JE LAU & ASSOCIATES	51 INVESTIGATOR ST	RED HILL	ACT 2603
OVERTON	MR WWD	AGSO	GPO BOX 378	CANBERRA	ACT 2601
PLEASE	MS PM	AGSO	GPO BOX 378	CANBERRA	ACT 2601
TUCKER	MR A	AGSO	GPO BOX 378	CANBERRA	ACT 2601

QUEENSLAND					
NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE
ASEPVRATHAM	DR AM	MINEMCO P/L	400 BOUNDARY STREET	SPRINGS HILL	QLD 4000
BATCHELOR	DR DAF	ENVIRONMENTAL LICENSING PROFESSIONALS	65 BLUE GRASS CRESCENT	WISHERY OUTLOOK	QLD 4113
BEDFORD	MR KA	DPI WATER RESOURCES	4 MOORAMA RD	THE GAP	QLD 4061
BINCH	MR T	COFFEY PARTNERS INTERNATIONAL P/L	PO BOX 4011	EIGHT MILE PLAINS	QLD 4113
BRIESE	MR E	DOUGLAS PARTNERS PTY LTD	27 JEAYS ST	BOWEN HILLS	QLD 4006
CALLOW	MR IP		39 TAIT STREET	TEWANTIN	QLD 4545
COX	DR ME	SCHOOL OF GEOLOGY - QUT	GPO BOX 2434	BRISBANE	QLD 4001
COX	MR R	DPI WATER RESOURCES	4 WELLDAN ST	THE GAP	QLD 4061
DEEGAN	MR C	DOUGLAS PARTNERS PTY LTD	27 JEAYS ST	BOWEN HILLS	QLD 4006
DEKTYAREV	MR S		569 GEELONG ST	EAST BRISBANE	QLD 4169
DEMPSTER	MR D	DPI	PO BOX 910	BUNDABERG	QLD 4670
OHARMAJIRI	MR JK		1098 LOGAN RD	HOLLAND PARK	QLD 4121
CHATLOFF	MS N	CHENOWETH & ASSOCIATES	52 LANCAST ST	PULLENVALE	QLD 4069
COHERY	DR J	DPI	336 CLIVEDEN AVENUE	COORINDA	QLD 4075
ELLIS	MR RI	DPI WATER RESOURCES	PO BOX 316	MOOROOKA	QLD 4105
EVANS	MR PA	DEPT OF ENVIRONMENT & HERITAGE	28 PALLARANDA STREET	TARRAGINDI	QLD 4121
FOONS	MR YK	CMPS AND F	200 MARY STREET	BRISBANE	QLD 4000
FORTH	MR JR	UHR MANAGEMENT COMPANY P/L	GPO BOX 905	BRISBANE	QLD 4001
FOSTER	MS LM	DPI	16 LYNDAL CRT	MCRAFFIELD	QLD 4508
FREE	MR DL	DPI WATER RESOURCES	11 KAT OOMBA CRESCENT	TOOMBOOMA	QLD 4356
FURNESS	MR LJ	DOUGLAS PARTNERS PTY LTD	27 JEAYS ST	BOWEN HILLS	QLD 4006
HAIR	MR ID	COFFEY PARTNERS INTERNATIONAL	538 FAIRLAWN STREET	NATHAN	QLD 4111
HARJAN	MR J	RUST PPK PTY LTD	34 ALTON TCE	THE GAP	QLD 4061
HERBERT	MR G	DPI WATER RESOURCES	PO BOX 156	MAREEBA	QLD 4880
HILLER	MR JR	DPI WATER RESOURCES	35 LYTHAM ST	INDOOROOPIILY	QLD 4068
HORN	MR AM	DPI	80 HUME ST	TORWOOD	QLD 4068
HUXLEY	MR WJ	DPI	80 MEIERS ROAD	INDOOROOPIILY	QLD 4068
IRVINE	MR DW	AGC - WOODWARD CLYDE	35 COOLGARDIE STREET	SUNNYBANK HILLS	QLD 4109
JENSEN	MR GR	DPI WATER RESOURCES	PO BOX 156	MAREEBA	QLD 4880
KILL	MS SJ		ENDEAVOUR ROAD	BEERBURRUM	QLD 4517
KIRSCH	DR B	CENTRE FOR MINE LAND REHABILITATION	UNIVERSITY OF QLD	ST LUCIA	QLD 4072
LAING	MR C	ACM LAING AND ASSOCIATES	3319 MOGGILL RD	BELLBOWRIE	QLD 4570
LAIT	MR RW	DPI WATER RESOURCES	6 NELSON STREET	ONSFAL	QLD 4508
LEACH	MR L		7 WELFTH & AVE	HOME HILL	QLD 4806
LEE	MR A	DAMES AND MOORE	PO BOX 261	SPRING HILL	QLD 4004
LI	MS J	SCHOOL OF GEOLOGY QUT	GPO BOX 2434	BRISBANE	QLD 4001
LLOYD	MR J	DPI WATER RESOURCES ROCKHAMPTON	36 EDWARD ST	NTH ROCKHAMPTON	QLD 4701
LLOYD	MR T	WOODWARD-CLYDE	26 BEACONSFIELD TERRACE	GORDON PARK	QLD 4031
LOCKINGTON	DR DA	DEPT OF CIVIL ENGINEERING	UNIVERSITY OF QUEENSLAND	BRISBANE	QLD 4072
MCGARRY-HEATON	MR P	DEH	PO BOX 612	BURLEIGH HEADS	QLD 4220
MCMANON	MR GA		19 POLLUX AVE	COOPAROOK	QLD 4151
McNEIL	MRS VH	DPI WATER QUALITY	GPO BOX 2454	BRISBANE	QLD 4001
MOSER	MR AP	COFFEY PARTNERS INTERNATIONAL	538 FAIRLAWN STREET	NATHAN	QLD 4111
PATEL	DR B	SCIENCE & TECHNOLOGY	GRIFFITH UNIVERSITY	NATHAN	QLD 4111
PEARCE	MR B	DPI WATER RESOURCES	168 FLOCKTON ST	EVERTON PARK	QLD 4053
POPRAWSKI	DR WA	DPI WATER RESOURCES	GPO BOX 2454	BRISBANE	QLD 4001
RUFILL	MR JA	GROUNDWATER TECHNOLOGY AUSTRALIA P/L	PO BOX 2220	FOKITTITUDE VALLEY MAC	QLD 4056
ROBERTSON	MR MD	GOLDER ASSOCIATES	72 KELVIN GROVE RD	NORMANBY	QLD 4059
SMITH	MR PE	WASTE SOLUTIONS AUSTRALIA P/L	PO BOX 514	ASHGROVE	QLD 4060
SMOLSKI	MR B	RUST PPK PTY LTD	6 CHELSEA COURT	CARDINDALE HEIGHTS	QLD 4152
STEFFENS	MS M	ENVIRONMENTAL GW CONSULTANTS	60 DRYSDALE STREET	MOUNT OMMANEY	QLD 4074
STURGESS	MR BF	GDPI	11/136 GEORGE STREET	BUNDABERG	QLD 4670
TALBOT	MR MJ	DAMES AND MOORE	17/68 GLADSTONE RD	HIGHGATE HILL	QLD 4101
TYSON	MS PL		233 CHAPEL HILL ROAD	CHAPEL HILL	QLD 4069
VIRTUE	MR RJ		7 ASTOLAT ST	FERONGA	QLD 4104
WEEKS	MR WD	KINHELL CAMERON MCNAMARA	22 GLENELG PLACE	YERREBONG	QLD 4053

NORTHERN TERRITORY					
NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE
ANNING	MR JM	PAWA	8 CAVENAGH ST	DARWIN	NT 0801
BAYDEN	MR J	NABALCO LTD	PO BOX 21	MULLURBU	NT 0881
CALVERT	MR HT	PAWA	GPO BOX 1098	DARWIN	NT 0801
HUMPHREYS	MR GL	PAWA	GPO BOX 1098	DARWIN	NT 0801
JAMESON	MR MC	PAWA	PO BOX 1521	Alice Springs	NT 0871
KARP	MS D	POWER AND WATER AUTHORITY	PO BOX 4729	DARWIN	NT 0871
McDONALD	MR P	POWER AND WATER AUTHORITY	PO BOX 1521	Alice Springs	NT 0871
PIDSLEY	MR D	PAWA	GPO BOX 1098	DARWIN	NT 0801
CURESHI	MR H		21 WULAGI CRES	SANDERSON	NT 0512
SANDERS	MR RA	POWER AND WATER AUTHORITY	PO BOX 1098	DARWIN	NT 0801
SANDERS	MR DD	NABALCO PL - ENGINEER SERVICES	PO BOX 21	MULLURBU	NT 0881
SMYK	MR IL	PAWA	PO BOX 42355	CASUARNA	NT 0811
SMITH	MR S		PO BOX 2374	DARWIN	NT 0801
TICKELL	MR M		14 WANDIE CRES ANULA	DARWIN	NT 0812
VERMA	MR M			DARWIN	NT 0812
WISCHUSEN	MR JD		PO BOX 8240	Alice Springs	NT 0871
YIN FOO	MR D		PO BOX 3231	DARWIN	NT 0801
ZAAR	MS U		15 CLEMATIS ST	NIGHTCLIFF	NT 0810

SOUTH AUSTRALIA					
NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE
ANDREWS	MR LJ	GROUNDWATER TECHNOLOGY PA	UNIT 1, 410 CHURCHILL ROAD	KILBURN	SA 5084
ARMSTRONG	MR D	LISON ASSOCIATES	77 MAWI MORNEDENE DRIVE	GLENALTA	SA 5082
BARNETT	MR SR	SADME	PO BOX 151	EASTWOOD	SA 5083
BOWYER	MR DG	SANTOS LTD - EXPLORATION/DEVEL	101 GRENFELL ST	ADELAIDE	SA 5000
COBB	MR M	WATER SEARCH	PO BOX 191	ANGASTON	SA 5353
COX	DR J	CRC - SOIL AND LAND MANAGEMENT	PMB 2	GLEN OSAMOND	SA 5014
GILLON	DR P	CENTRE FOR GROUNDWATER STUDIES	PRIVATE BAG 2	GLEN OSAMOND	SA 5084
EVANS	MR SL	DEPT OF ENVIRONMENT & NATURAL RESOURCES	PO BOX 22	PORT LINCOLN	SA 5606
DUGPEN	MRS BJ	GROUNDWATER TECHNOLOGY AUSTRALIA PA	UNIT 1, 410 CHURCHILL ROAD	KILBURN	SA 5084
LOVE	MR AJ	SADME	PO BOX 151	EASTWOOD	SA 5083
MARTIN	MR R	SADME	PO BOX 151	EASTWOOD	SA 5083
McARTHUR	MR DG	RUST PPK PTY LTD	23 CORRELLA ST	NURROOTPA	SA 5355
POWER	MR NA	DEPT OF ENVIRON & NAT RESOURCES	68 KESTRAL WAY	MODBURY HEIGHTS	SA 5032
RUGH	MR SJ		4 COLLINGWOOD AVENUE	HAZELWOOD PARK	SA 5088
SMITH	MR PC		9 MARLBOROUGH RD	WESTBOURNE PARK	SA 6014
STADTER	MR MH	SADME	PO BOX 83	NARACOORTE	SA 6271
STONE	DR C	SOUTH EASTERN DRAINAGE BOARD	PO BOX 331	MULLICENT	SA 5230

OVERSEAS						
NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE	COUNTRY
WALL	MR LJ	CHINA-AUSTRALIA MINEWASTE PROJ	C-BGRAM 1 WENDING ST	XIHOJHEN WAI	BEIJING	CHINA 100044
BRIDGHTON	MS AK	CA- SA BARNES ROAD	REDWOOD	CHRIST CHURCH		NEW ZEALAND
BROWN	MR LJ	INST GEOLOGICAL & NUCLEAR SCIENCE	PO BOX 30388	LOWER HUTT		NEW ZEALAND
PALL	MR RJ		PO BOX 2965	RUWI	PC 112	OMAN
GBOY	MR CA	CA- MINISTRY OF WATER RESOURCES	PO BOX 1067	SALALAH 211		OMAN
READ	MR R	MINISTRY OF WATER RESOURCES	PO BOX 1076	SALALAH		OMAN
McGANN	MR MP	CA- WIS ATKINS INTERNATIONAL	PO BOX 2065	RUWI 112		OMAN
SOMARATNE	DR NA		PO BOX 689	MUSCAT 113		OMAN
PROWSE	MR G	CA- AUSCON	PO BOX 5827	RUWI		OMAN
LYTTON	MS LM	DEPT OF LAND & WATER CONSERVATION	NEWBUILDINGS PLACE	SHIPLEY HORSHAM	SUSSEX	UK RH10 7JQ
WHINCUP	MR P	DAMES AND MOORE	15-17 CHURCH ST	TWICKENHAM UK	TW1 3NO	UNITED KINGDOM
RELM	DR DC	NEVADA BUR OF MINES & GEOLOGY	UN NEVADA 1178	RENO NV89557-0088	NEVADA	USA

NEW SOUTH WALES					
NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE
BAGINSKA	B	SCH OF AG & RURAL DEV, UNI OF W SYD	HAWKESBURY, BOURKE STREET	RICHMOND	NSW 2753
ACWORTH	DR R I	UNIVERSITY OF NSW	KING ST	MANLY VALE	NSW 2093
ALAM	DR SAM		69 UNSTED CRESCENT	HILLSDALE	NSW 2036
ANDERSON	MS JD	DEPT OF LAND & WATER CONSERVATION	PO BOX 3720	PARRAMATTA	NSW 2124
BENTON	MR SG	KINMILL METCALF & EDDY	PO BOX 28	RAILWAY SQUARE	NSW 2000
BISH	MS S	DEPT OF LAND & WATER CONSERVATION	PO BOX 3720	PARRAMATTA	NSW 2124
BOGODA	MR KR	DEPT OF LAND & WATER CONSERVATION	PO BOX 205	DENULQUIN	NSW 2710
BRADD	MR JM	DEPT OF LAND & WATER CONSERVATION	951 LAKE PARADE	CORRIHAL	NSW 2518
BULMAN	MR VJM	BLUEWATER GEOSCIENCE SERVICES	17 FADDEN PLACE	WAHROONGA NORTH	NSW 2078
BULMAN	MS T	ADI - IDD	LOCKED BAG 80	UDCOMBE	NSW 2141
CALAITZIS	MR P	DEPT OF LAND & WATER CONSERVATION	PO BOX 488	MOREE	NSW 2400
CARMICHAEL	MT T	CAMP SCOTT AND FURPHY	PO BOX 201	CHAITSWOOD	NSW 2068
CARSONE	DR F	AGC - WOODWARD CLYDE P/L	485 PACIFIC HIGHWAY	ST LEONARDS	NSW 2087
CARR	DR RS	LAWSON & TRELQAR PTY LTD	10 BOX 799	NORTH SYDNEY	NSW 2060
CASEY	MR DA		5 MITCHELL STREET	CARINGBAH	NSW 2229
COLLIN	MR D	DEPT OF LAND & WATER CONSERVATION	1 WATTLE CRESCENT	MOREE	NSW 2400
DALE	MR MJ	GROUNDWATER TECHNOLOGY P/L	35 BELMORE ST	ROZELLE	NSW 2039
DANIELS	MR CW	WATER RESEARCH LABORATORY	1 KING STREET	MANLY VALE	NSW 2093
DAWKINS	MR AP	ENVIRONMENTAL & EARTH SCIENCES	21 WARWICK ST	STANMORE	NSW 2048
DEIT	MR BB		111 NEPEAN AVENUE	NORMANHURST	NSW 2076
DONNELLY	MR PJ	DEPT OF PLANNING	226 LETITIA ST	OATLEY	NSW 2223
DUDGEON	MR BA	COFFEY PARTNERS INTERNATIONAL	12 WATERLOO ROAD	NORTH RYDE	NSW 2113
DUNDON	MR P	AGC - WOODWARD CLYDE P/L	488-494 PACIFIC HWY LVL 6	ST LEONARDS	NSW 2065
ELLIOTT	MR JM	CLUMEC PTY LTD	66 GIPPS ST	BALMAIN	NSW 2041
EYRE	MR BD	CENTRE FOR COASTAL MANAGEMENT	PO BOX 5125	EAST LISMORE	NSW 2480
GATES	MR G	DEPT OF LAND & WATER CONSERVATION	PO BOX 3720	PARRAMATTA	NSW 2124
GREEN	MR R	DAMES & MOORE	LEVEL 1 NO 41 MCLAREN STREET	NORTH SYDNEY	NSW 2060
HARWOOD	MR RC	GROUNDWATER TECHNOLOGY P/L	17 FORRESTER ROAD	KINGSGROVE	NSW 2208
HATLEY	MR RX	WOODWARD CLYDE PTY/LTD	485 PACIFIC HIGHWAY LEVEL 6	ST LEONARDS	NSW 2065
HAWKES	MR GE	COFFEY PARTNERS INTERNATIONAL	12 WATERLOO RD	NORTH RYDE	NSW 2113
HAYTER	MR MG	DAMES AND MOORE	21 BLACKBURN ST	ST IVES	NSW 2075
HITCHCOCK	MR PW	DOUGLAS PARTNERS PTY LTD	1 NATIONAL PARK ST	NEWCASTLE WEST	NSW 2302
HOPKINS	MR B		1 OCEAN ROAD	MANLY	NSW 2095
HUNDI	MR N		227 UNRA ST	CAMPSIE	NSW 2194
JEWELL	MR CM	CM JEWELL AND ASSOCIATES P/L	4 PANORAMA CRESCENT	WEAVERMOUTH FALLS	NSW 2182
JIWAN	DR JS	DEPT OF LAND & WATER CONSERVATION	8 TALBOT STREET	GULDFORD	NSW 2161
KIDD	MR C	AGC - WOODWARD CLYDE P/L	485 PACIFIC HWY LEVEL 6	ST LEONARDS	NSW 2065
KROCHT	DR MJ	NATIONAL CENTRE GW MANAGEMENT	54 WATTLE ROAD	JANNALI	NSW 2229
KONTOS	MR NA		PO BOX 894	KOGARAH	NSW 2217
KULATINGA	MR N	DEPT OF LAND & WATER CONSERVATION	PO BOX 205	DENULQUIN	NSW 2710
LAWSON	MR SJ	DEPT OF LAND & WATER CONSERVATION	PO BOX 158	LEETON	NSW 2705
LE	MR VT	ADI	GRD FLOOR 77 PARRAMATTA RD	SILVERWATER	NSW 2141
MACQUE	MR CD	RUST PPK PTY LTD	9 BLAXLAND RD	RHODES	NSW 2138
MARSDON	MR SE		71/28 WARNERS AVENUE	NORTH BONDI	NSW 2026
MC LAUGHLIN	DR R	NATIONAL CENTRE GW MANAGEMENT	UNIVERSITY OF TECHNOLOGY	BOX 123 BROADWAY	NSW 2007
MCNAMARA	MS JM	AGC - WOODWARD CLYDE P/L	LVL 6 488-494 PACIFIC HWY	ST LEONARDS	NSW 2065
MERRICK	MR N	NATIONAL CENTRE GW MANAGEMENT	UNIVERSITY OF TECHNOLOGY	BOX 123 BROADWAY	NSW 2007
MILNE-HOME	DR W	NATIONAL CENTRE GW MANAGEMENT	UNIVERSITY OF TECHNOLOGY	BOX 123 BROADWAY	NSW 2007
MILR	MR G	EPA OF NSW	LOCKED BAG 1502	BANKSTOWN	NSW 2200
MILVEY	MR PJ	ENVIRONMENTAL & EARTH SCIENCES	PO BOX 330	NORTH SYDNEY	NSW 2060
NANDAN	MR M		13 MCKELL CLOSE	BONNYRIGG	NSW 2177
NASH	MR JM	DOUGLAS PARTNERS PTY LTD	96 HERMITAGE RD	WEST RYDE	NSW 2114
ONEILL	MR KM	C LONGMAC ENVIRONMENTAL	36 OXLEY STREET	CROWNS NEST	NSW 2065
PAUL	MR D	DEPT OF LAND & WATER CONSERVATION	PO BOX 3720	PARRAMATTA	NSW 2124
PERITY	MR CL	STUDENT	108 PACIFIC HIGHWAY	ROSEVILLE	NSW 2063
RITCHIE	DR AIM	INST D	PRIVATE MAIL BAG 1	MENA	NSW 2234
ROBERTS	MR P		6 TALBOT ROAD	GULDFORD	NSW 2161
ROBERTSON	MR N		127 CURLEWIS ST	BONDI BERACH	NSW 2028
ROSS	MR JB	GROUNDWATER TECHNOLOGY P/L	17A ROPER CRESCENT	SYLVANA WATERS	NSW 2224
RUSSELL	MR GN	COFFEY PARTNERS	12 WATERLOO RD	NORTH RYDE	NSW 2113
SALAS	MR G	DEPT OF LAND & WATER CONSERVATION	22 SAPPALUGA RD MS 5	DUBBO	NSW 2830
SALOTTI	MR D		12 TUPPER STREET	MARRICVILLE	NSW 2138
SCOTT	MR D	RUST PPK PTY LTD	9 BLAXLAND RD	RHODES	NSW 2138
SINCLAIR	MR P	DEPT OF LAND & WATER CONSERVATION	PO BOX 3720	PARRAMATTA	NSW 2124
SULLIVAN	MR HK	GOLDER ASSOCIATES PTY LTD	161A COPELAND RD	EAST BEECROFT	NSW 2119
THOMSON	MR D	RUST PPK PTY LTD	PO BOX 248	CONCORD WEST	NSW 2138
WEBB	MRS ST	DEPT OF LAND & WATER CONSERVATION	PO BOX 10	WAGGA WAGGA	NSW 2655
WILLGOOSE	DR GR	DEPT CIVIL ENG AND SURVEY	UNI OF NEWCASTLE	CALLAHAN	NSW 2308
WILLIAMS	MR RM	DEPT OF LAND & WATER CONSERVATION	PO BOX 3720	PARRAMATTA	NSW 2124
WOLDRIDGE	MR DJ	GROUNDWATER SOLUTIONS	75 TYNDES AVENUE	WILLOUGHBY	NSW 2068
WOOLLEY	MR DR		3 BARWON AVE	TURRAMURRA	NSW 2074
YU	MR X	PHD STUDENT, DEPT APP GEOL UNSW	PO BOX 1	KENSINGTON	NSW 2033

VICTORIA					
NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE
ABO	DR F		18 WAHROONGA CRES	GREENSBOROUGH	VIC 3088
ANDERSON	MR RB	COFFEY PARTNERS INTERNATIONAL	16 CLURCH STREET	HAWTHORN	VIC 3122
BARTLEY	MR AG	HYDROTECHNOLOGY	3 RANDOLPH ST	HAWTHORN	VIC 3122
BASOČAK	MR C				
BEESON	MR A	GEO TEST INSTRUMENTATION	4 THANOS COURT	HAMPTON PARK	VIC 2078
BLAKE	MR R	R BLAKE AND ASSOCIATES	454 WAVERLEY ROAD	EAST MALVERN	VIC 3145
BLOUNT	MR AW		671 STATION ST	NORTH CARLTON	VIC 3054
BOLGER	MR P	CMPS & F	110 EVELINA STREET	BOX HILL	VIC 3120
BRADLEY	MR JW	GEOENG AUSTRALIA	PO BOX 92	MELBOURNE	VIC 3004
BRINKLEY	MR AJ	HYDROTECHNOLOGY	530 ORRONG RD	MORWELL	VIC 3840
BROWNBILL	MR RJ		100 BORDALE ST	ARMADALE	VIC 3143
BRUNLEY	MR J		49 UNWIN ST	TEMPLESTOWNE	VIC 3105
CARAPINA	MS SM	ADI - IDO	PO BOX 22	HIGHPOINT CITY	VIC 3052
CATTLIN	MR L		63 ARDOYNE STREET	SUNSHINE	VIC 3020
COLEMAN	MR B		14 OXFORD CLOSE	CROYDON HILLS	VIC 3138
DAHLHAUS	MR PG	GEOLOGY DEPT BALLARAT UNIVERSITY	PO BOX 663	BALLARAT	VIC 3363
DAY	MR C	DEPT OF CONSERVATION & ENVIRONMENT	PO BOX 401	BENDIGO	VIC 3550
DEENEY	MR AC	DAMES AND MOORE	LEVEL 10, 636 ST KILDA ROAD	MELBOURNE	VIC 3004
DIMOS	MISS A	RWC	590 ORRONG RD	ARMADALE	VIC 3143
BRIDGING	MR M	SINCLAIR KNIGHT MERZ	590 ORRONG RD	ARMADALE	VIC 3143
EAUSTON	MR MN	PETER RAMSAY & ASSOC PL	10222 KINGSWAY	SOUTH MELBOURNE	VIC 3205
EDDER	MR GM		17 WINCHESTER STREET	MOONEE PONDS	VIC 3032
EVANS	DR R	HYDROTECHNOLOGY	5 PLEASANT AVE	KEW	VIC 3101
EVANS	MR J	KINHILL METCALF AND EDDY	441 ST KILDA RD (LEVEL 3)	MELBOURNE	VIC 3004
FINEGAN	MR J	SCHOOL OF EARTH SCIENCE	UNIVERSITY OF MELBOURNE	PARKVILLE	VIC 3052
FLYNN	MR T		90 GLEESON DRIVE	GUNDOORA	VIC 3083
FOTHERGILL	MR AJ	DAMES AND MOORE	LEVEL 10, 838 ST KILDA ROAD	MELBOURNE	VIC 2000
FRIDAY	MR RG	GOLDER ASSOCIATES	25 BURWOOD RD	HAWTHORN	VIC 3122
GALE	MS R	GROUNDWATER TECHNOLOGY AUSTR	8177 BEAVERS ROAD	NORTHCOOTE	VIC 3070
GLIBA	MR SM		24710 MARINE PARADE	ST KILDA	VIC 3182
HADWEN	MR JP		534 MERRIDA AVE	GLENHURTY	VIC 3153
HANCOCK	MR S	AGC - WOODWARD CLYDE P/L	3349 BRIDGE ROAD	RICHMOND	VIC 3121
HARRISON	MR AK	HYDROTECHNOLOGY	590 ORRONG RD	ARMADALE	VIC 3143
HOCKLEY	MR G		818 MT DANDENONG ROAD	MONTROSE	VIC 3705
IFE	MR D	AGC - WOODWARD CLYDE	26 WOODLANDS AVENUE	CAMBERWELL	VIC 3123
INGRAM	MR T		11 GREEN STREET	EAST RINGWOOD	VIC 3135
JENNINGS	A		PO BOX 82	MORWELL	VIC 3840
JOYCE	MR EB	DEPT. OF GEOLOGY	UNIV. MELBOURNE	PARKVILLE	VIC 3052
KATPODIS	MR T	DOUGLAS PARTNERS PTY LTD	68 BRIGHTON STREET	RICHMOND	VIC 3121
KWATKOWSKI	MR J		274 PRINCESS AVENUE	SPRINGVALE	VIC 3171
LAKEY	MR RC		32 BLAIR ST	COBURG	VIC 3058
LANE	MR AP	DOUGLAS PARTNERS PTY LTD	68 BRIGHTON STREET	RICHMOND	VIC 3121
LAWRENCE	DR CR	SCHOOL OF EARTH SCIENCES	UNIVERSITY OF MELBOURNE	PARKVILLE	VIC 3052
LEONARD	MR J		20 MERRIDA AVENUE	GLENHURTY	VIC 3163
MACUMBER	DR P	DEPT OF WATER RESOURCES	20 RANGEVIEW RD	MITCHAM	VIC 3132
MALTEY	MR DP	CSR READYMAX	14 ALSTRAAL AVENUE	BRUNSWICK	VIC 3058
MANTLE	DR JDG	RUST PPK PTY LTD	PO Box 337	WILLIAMSTOWN	VIC 3018
MOLICA	MR JG		4/38 BELMONT AVE NTH	GLEN IRIS	VIC 3148
NOLAN	MR RB	RURAL WATER CORPORATION	PO BOX 393	EAST KEW	VIC 3102
NOTT	MR RB	RURAL WATER CORPORATION	13710 HIGHBURY GROVE	PAHMAN	VIC 3181
NUNN	MR AA	CMPS & F	390 ST KILDA RD	SOUTH MELBOURNE	VIC 3004
ORRIDGE	MS ME	RURAL WATER CORPORATION	590 ORRONG RD	ARMADALE	VIC 3143
OROURKE	MR M		38 CUMMINGS ST	BURWOOD	VIC 3125
OAKES	MR A	RURAL WATER CORPORATION	22 HIGGATE GROVE	ASHBURTON	VIC 3187
OLSHINA	MR A	GEOLOGICAL SURVEY OF VICTORIA	1 DERAMOT ST	SOUTH OAKLEIGH	VIC 3187
PETTFER	MR G	DEPT. OF IND. TECH. & RES.	PO BOX 173	EAST MELBOURNE	VIC 3002
POTTS	MR IW	CMPS & F	330 ST KILDA RD	MELBOURNE	VIC 3004
PRAIT	MR M		20 VICKI ST	BLACKBURN STH	VIC 3130
REID	MR M	CENTRE FOR LAND PROTECTION RESEARCH	PO BOX 401	BENDIGO	VIC 3550
ROBINSON	MR KJ		7 LOUGHANAN STREET	RICHMOND	VIC 3121
ROBINSON	MR MA		75 DAFFODIL RD	BORONA	VIC 3155
RYAN	MS S	OCNR	5/250 VICTORIA PDE	EAST MELBOURNE	VIC 3002
SCHAEFFER	MR J	GEO - ENG AUST P/L	PO BOX 42	MORWELL	VIC 3840
SCHWAB	DR K	GEO POLLUTION MANAGEMENT P/L	15/21 EUGENE TERRACE	RINGWOOD	VIC 3134
SEDDON	MR TD	MPA WILLIAMS & ASSOCIATES	533 NEPEAN HWY	BONBEACH	VIC 3196
SHUGG	MR A		15 PARK RD	MIDDLE PARK	VIC 3206
STEWART	MR G		22 MAIDEN ST	NORTH BALWYN	VIC 3104
STRUDWICK	MR D	ENVIRONMENTAL PROTECTION AUTHORITY, VIC	GPO BOX 438500	MELBOURNE	VIC 3001
THOMAS	MS DA	GHD	14 MCDONALD ST	WILLIAMSTOWN	VIC 3018
THORNE	MR R		34 SIMS ST	SANDRINGHAM	VIC 3121
WALKER	MISS S	DOUGLAS PARTNERS PTY LTD	68 BRIGHTON STREET	RICHMOND	VIC 3121
WALKER	MR G		PO BOX 58	KOO WEE RUP	VIC 3681
WEAVER	MS TR	GOLDER ASSOCIATES	25 BURWOOD RD	HAWTHORN	VIC 3122
WILLIAMSON	DR RJ	DEPT CONS AND NAT RESOURCES	15 PENDER ST	THORNHURTY	VIC 3071

WESTERN AUSTRALIA

NAME	TITLE	COMPANY	ADDRESS	TOWN	STATE	
ALLEN	DR AD	GEOLOGICAL SURVEY OF WA	100 PLAIN ST	PERTH	WA 6004	
APPLEYARD	DR SJ	GEOLOGICAL SURVEY OF WA	9 ALBERT ST	MOGSIAN PARK	WA 6012	
BADDOCK	MR L	GEOLOGICAL SURVEY OF WA	100 PLAIN ST	PERTH	WA 6004	
BARBER	DR C	CSIRO	17 ALLPIKE RD	DARLINGTON	WA 6078	
BARNETT	MR JC	DAMES AND MOORE	4 BIRD RD	KALAMUNDA	WA 6053	
BARRIETT	MR S TD		PRIVATE BAG	PO WEMBLEY	WA 6014	
BATES	MS S	CSIRO ON WATER RESOURCES		BELMONT	WA 6104	
BERRY	MR KA	WESTERN MINING CORPORATION	PO BOX 91	NEWMAN	WA 8753	
BEST	MR PJ	BHP IRON ORE	BOX 655	CONNOLLY	WA 6027	
BOLTON	MR G	ROCKWATER PTY LTD	10 PEBBLE BEACH EDGE	ALBANY	WA 6030	
BORNMAN	MR JC		PO BOX 5815	BOYA	WA 6056	
BOURGAILL & COUDRAY	MR PL		LOT 52 HUDMAN ROAD	WALSON	WA 6107	
BOYES	MR B	GROUNDWATER SERVICES PTY LTD	6 TAMAR CLGSE	LEEMING	WA 6155	
BRUNNER	MR I	DAMES AND MOORE	11 EMPREN CRT	WESTFIELD	WA 6112	
CAMPBELL	MR GD	GRAEME CAMPBELL AND ASSOCIATES	17 DRYTON COURT	SOUTH PERTH	WA 6151	
CHANDLER	MR M	DAMES AND MOORE	85 THE ESPLANADE	KINGSLEY	WA 6026	
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HYDROGEOLOGY JOURNAL

Edited by Clifford I. Voss and William E. Wilson



Co-Sponsored by the Hydrogeology Division of
the Geological Society of America

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